

PROCEEDINGS

AMERICAN SOCIETY OF CIVIL ENGINEERS

JUNE, 1955



IS SUBSIDY NECESSARY FOR ADEQUATE MASS TRANSIT?

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CITY PLANNING DIVISION

{Discussion open until October 1, 1955}

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Printed in the United States of America

Headquarters of the Society
33 W. 39th St.
New York 18, N. Y.

PRICE \$0.50 PER COPY

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This paper was published at 1745 S. State Street, Ann Arbor, Mich., by the American Society of Civil Engineers. Editorial and General Offices are at 33 West Thirty-ninth Street, New York 18, N. Y.

IS SUBSIDY NECESSARY FOR ADEQUATE MASS TRANSIT?

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The question put to me by your Program Committee "Is Subsidy Necessary for Adequate Mass Transit?" can be answered fully by the word "Yes." I suspect, however, that your Committee intended that I give a somewhat longer talk on the subject. I will ask myself the further questions, therefore, "Why is subsidy necessary for adequate mass transit?" and "How can subsidy best be supplied?"

Subsidizing of public transportation systems has been practiced for at least thirty-five years—roughly since the end of World War I. Only recently, however, has the subject been considered worthy of public discussion—perhaps because not until recently was it the general taxpayer who was asked to make the subsidy. Formerly, the contributions were made by those who bought stocks or bonds in transit companies with the hope of receiving a reasonable return on their money. In many instances, however, investors soon found that they were unwillingly subsidizing transit operation by foregoing all or a major portion of the anticipated dividends. In other cases investors even subsidized such operations to the extent of losing their original capital. It has been estimated, for example, that the purchasers of transit securities have subsidized local transportation in Chicago during the past forty years to the extent of \$270,000,000. I will define subsidy for the purpose of this discussion, however, as willing and intentional assistance through taxation.

The answer to the question "why is subsidy necessary" is a little more lengthy than the answer to the query "is subsidy necessary." Perhaps you are not fully acquainted with the drastic decline in transit patronage during recent years. The transit industry carried 23 billion passengers in 1944. In 1948, transit still carried 21-1/2 billion. But in 1953—just five years later—the number had dropped more than one-third to 14 billion, and that during a period of expanding economy. The decline in patronage in 1954 over 1953 was approximately 11-1/2 per cent, indicating that the trend is for a faster fall-off in business rather than for a leveling off or stabilizing. Just as the crisis is man-made, so must we find a man-made solution. The result of letting this trend continue unchecked could bring disaster to the transit industry. This, in turn, would have effects unpleasant to contemplate on the social and economic aspects of urban life.

Returning to our question, "why is subsidy necessary:" The transit industry has always been plagued by high rush hour peaks and deep mid-day and evening valleys. The trend in recent years has been for these peaks of riding to become sharper and shorter and for the valleys to become relatively much deeper. This can be attributed to many factors. Television, for one, has

* American Society of Civil Engineers Convention, San Diego, California, February 7-12, 1955.

1. President, De Leuw, Cather and Company, Cons. Engrs., Chicago, Ill.

lessened evening and Sunday transit riding for purposes of recreation. In this same field, the introduction of the outdoor theater has taken off-peak patronage away from the transit vehicle. Saturday is now the lowest day in the week, except Sunday, in transit riding whereas it was formerly the highest. This can be attributed partly to the five-day work week and partly to the custom of family shopping on Saturdays, using the automobile to reach the new outlying shopping centers.

The old fashioned street car with its ability to carry from two to three passengers for every seat was well suited for extreme peak loads. Now when the loads have become even more unbalanced, we have replaced the street car with a bus which has a ratio of total load to seats of only about 1-1/2 to 1.

Another factor which has worked against the interest of the transit companies is the decentralization made possible by the automobile. This has caused the average length of ride to increase substantially. In addition, it has fostered demands for extension of transit service through thinly populated areas. Such routes were always unattractive to transit companies. Formerly, however, the minor losses on a few weak lines could be offset by profits on the stronger lines in more densely populated territory.

Despite the recent drop in business, most transit companies could make money if they could lose another 50 per cent of their patrons, providing that the loss occurred in rush hours without any decrease in mid-day or evening riding. Some companies have four times as many buses on the street in rush hours as they need to carry the mid-day traffic. This means, of course, that four times as many buses are owned and almost four times as many men are employed as would be needed if patronage were better distributed. Many of the men must be paid for eight hours in order to furnish only two or three hours of profitable revenue producing service.

The transit industry has been faced with the same increases in labor costs as other industries. Rather than producing more per man-hour as wages went up, however, the average transit vehicle operator, due to traffic congestion as well as to smaller vehicles, is now able to produce fewer passenger-miles—his company's only product—than he could ten years ago. Manufacturing industries have been able to meet the wage problem in part by increasing the amount of invested capital per worker. Thus, a man operating bigger and faster machines produces more per dollar of direct labor costs. The transit industry does not have this opportunity due to limitations on the size of the vehicle for surface operation.

For a time the conversion from two-man to one-man operation enabled transit companies to increase production per man-hour. That economy has long since been fully exploited. Similarly, the industry has explored aggressively and with imagination many other ways to economize, to promote patronage, and to modernize operations. Those companies which are now seeking some form of subsidy are doing so as a last resort.

You may ask why the transit patron should receive the benefit of a lower fare through assessment of a tax against non-transit riders. The most practical answer is that if Mr. Average Taxpayer does not contribute to keep transit in operation in his city, he is likely to be assessed a much greater sum in order to provide highway capacity and parking places for those who would be forced to use their automobiles if there were no public transportation.

In Chicago's loop, for example, about 88 per cent of those in the area at the period of peak accumulation (two o'clock in the afternoon) have arrived by public transportation, including suburban railroads. If they were all to be served by the automobile we would have to provide more than eight times as

much parking space as we now have. We would also have to have seven times as many lanes of roadways since the rush hour use of public and private transportation is in that ratio, and the highways presently available are used to capacity. Even if we had the time and the money to provide garages and highways on this scale, we would be hard pressed in our larger cities to find the space for these additional facilities. While we were attempting to adjust to a transit-less situation, the values of property in our central business districts—on which a very large share of our total taxes are based—would decline to such an extent that the average owner of residential property would feel a very sharp pain in the pocketbook. This, in turn, would hasten the flight to the suburbs, and the problem of municipal finances could reach catastrophic proportions.

It is by no means unusual to subsidize transportation facilities—the railroads, the airlines, the steamship companies have at one time or are currently being subsidized in one way or another. The railroads complain that subsidies are being given to the trucking industry in the form of free highways for inter-city travel. We hear very little, however, of the subsidy to ordinary traffic on our urban streets. Yet a recent study in Milwaukee showed that the city, in 1953, spent \$6.45 for street improvements for every dollar received from state aid, city taxes on motor vehicles, and parking meter and other parking revenues. The balance, of course, came from general taxes. Since almost every taxpayer is also a motorist, this policy draws no protest.

Subsidies to support a street system in this fashion are not subsidies in the sense that the life of an uneconomical operation is being prolonged or that an infant industry is being encouraged. Such subsidies simply recognize that some facilities available for the general use of the public have value for all of the taxpayers, whether or not certain individuals make direct use of those facilities. This is particularly true in the case of transit. A merchant may never ride a bus, yet his store is more valuable because customers can reach it by public transit. Most factories can operate only because employees can be drawn from a large area by the existence of public transportation. A residence is more valuable if transit is available to serve non-drivers or in the event of car failure.

It is not necessarily strange that an indispensable service for comfortable community living costs more to provide than it can produce in revenue. No one expects our fire departments, for example, to be self-supporting; nor for our parks and playgrounds, our schools, or even our police departments to be profitable enterprises. We accept, as normal obligations of all the taxpayers, the financial support of such activities.

"All right," you will say, "so the taxpayer should subsidize the bus company, but how?" Owners of transit properties have resisted subsidy in the past because, with subsidy, comes more and more regulation. There has been a sharp line between public ownership and private ownership.

Public ownership, however, is often a complete misnomer. The revenue bonds issued and sold by various cities, for example, are not owned by the public but by a relatively few large investors, most of them located elsewhere than in the municipality involved. The public does not actually own such properties until all of the bonds are retired. Nor are such bonds any responsibility of the taxpayers. Interest and debt retirement must be paid from revenues; hence the interest rate on these sometimes hazardous investments is much higher than it would be on full faith and credit municipal bonds.

Colonel Sidney Bingham, Chairman of the New York Board of Transportation, suggested revenue bond financing about three years ago as a widely

applicable cure for the ailing transit industry. It seems likely now that the time has passed when revenue bond financing would be possible in most situations. The usual provisions to be found in the trust agreements securing revenue bond issues obligate the public agency to increase charges imposed for the use of the services they render to the extent required to pay all operating and maintenance expenses, as well as interest and amortization charges on outstanding bonds. As a rule such provisions are effective on such revenue producing undertakings as toll roads, toll bridges, water works, power plants and parking facilities. In the case of public transit, however, the question naturally arises as to when the law of diminishing returns will become applicable, and this may become a most serious problem in some of our larger centers where flat fares have now reached a figure of 20 cents.

Another problem that must be faced is the regional aspect of public transit. A city cannot be expected to saddle itself with debt to provide better transportation for its competing suburbs and unincorporated areas. The transit operator usually finds his biggest problems and smallest earnings beyond the city limits. The solution seems to lie in metropolitan transit districts similar to water, sewer, and school districts, which transcend municipal boundaries as the need dictates. This situation has long since been met in Boston and in a number of foreign centers as regards transit, and more recently in Toronto in regard to both transit and other areawide community services.

Public ownership would result in fact as well as in name if a city or a metropolitan district were to buy outright the buses, garages, and other parts of a complete transit system. This could be done with money derived from current taxes or from the sale of full faith and credit bonds, just as it buys land for parks or pays for the paving of a street. For your purposes in making a quick computation of what the investment might be in your city, figure an all-bus system at \$15 to \$25 per capita.

The object of municipal ownership of your city's bus system would be, not to save the difference in interest costs between the two types of bonds, but to shift the entire cost of fixed charges from the transit patron to the general taxpayer. On the average transit property, operating buses only, capital charges amount to about one-third of the total cost of providing the service. The other item of fixed charges is taxes. State and federal taxes take ten to twelve cents of every dollar of gross receipts of a privately owned transit property. Public ownership would redistribute the tax load so that the bus rider received a measure of relief. The effect of purchase through general obligation bonds, including the tax relief, would be to divide the cost of providing a bus ride in the proportion of 40 to 45 per cent to be paid by the public at large and 55 to 60 per cent to be paid by the actual rider.

I have no illusions that transit fares could thus be reduced by 40 to 45 per cent, whereupon countless thousands of present motorists would leave their cars in garages and swarm back to the buses. If this happened, the taxpayers would save substantial sums, of course, that would otherwise be spent on parking lots, expressways, and other traffic facilities. The cost of the bus ride is not usually the determining factor influencing people to ride or not to ride. As mentioned before, however, bus fares seem to be close to the point of diminishing returns in many cities. Some method other than fare increases must be found, therefore, to render financial aid to bus systems as their income falls below expenses due to declining business and increasing costs. Public ownership of the physical properties—but not their operation—is suggested as the first step toward salvation of our transit systems.

Now for the second step. If a city, once it has purchased the material properties that comprise a transit system, wants the efficient operation associated with the profit motive it must evolve a management contract with appropriate incentives. Such a management contract would provide a base fee for managing the transit property with provision for extra compensation to reward exceptional performance. Since little capital would be required to enter into a management contract, it could be assumed that those holding the contract would be the individuals actually managing the property. This arrangement is being used with notable success in connection with municipally owned parking lots or garages in Chicago, Des Moines and Pittsburgh. Cities frequently employ private companies to maintain municipally-owned street lighting, parking meter, and traffic signal systems.

Under such a plan for transit operation a city would receive all revenues from fares and pay for all labor and materials. If expenses were greater than income, the deficit would come out of general taxes, just as in the case of street maintenance when costs exceed revenues from motor fuel taxes and other motor vehicle levies. Fares should be set at a rate, however, that would offset all maintenance and operating expenses. General tax moneys would be used normally only for the initial purchase of the property, or for subsequent additions or renewals and for interest and retirement costs on the funded debt.

I have given you only two factors in the formula: taxpayer ownership of the transit property combined with a management contract with a built-in profit motive. There are many other elements that would have to be considered and settled, of course, such as service specifications, standards of maintenance, and fare structures.

I have pointed out the desirability of producing more seat-miles per man-hour of transit employees' time. This factor can be substantially increased in only one way and that is through the operation of rail vehicles in trains. These trains can operate, of course, in a subway, in the center mall of an expressway, on an elevated structure such as the monorail, or on a private right-of-way segregated from all other traffic.

I am glad your Program Committee included the word "adequate" in the subject assigned me. Even subsidies will not save our transit systems unless those subsidies are used to provide service acceptable to the potential riders. In the larger cities, where distances are great, one of the most important measures of adequacy is speed.

Fast service could conceivably be provided on portions of certain routes by bus service on expressways. Most of the time savings would be lost, however, by operation on a few blocks of congested downtown streets. Off-grade rail operation for downtown terminals to avoid this congestion usually involves continuation of rail service on private rights-of-way for some distance outward from the central area.

New developments of this type include the Toronto subway, opened in March 1954; the Cleveland Rapid Transit, due to open in March 1955; the extension of Chicago's subway in Congress Street Superhighway, planned for completion in 1958, and preliminary plans for rail rapid transit in Montreal, San Francisco, Los Angeles, and elsewhere.

The fact that such service is popular is demonstrated, I believe, by the experience in Toronto since the opening of its rapid transit line. This route consists of a subway for 3-1/2 miles and an open cut continuation of the same route for another mile, for a total of 4-1/2 miles. At the time this facility opened, the entire system was experiencing a decline in riding of about

1.6 per cent below corresponding periods of the previous year. Since the opening of the subway, the entire system has been running about 2.5 per cent above comparable periods of a year ago, giving a net algebraic effect of over 4.0 per cent increase.

Rapid transit operation is so economical, because of the high ratio of passenger miles per employee hour, that substantial net operating revenues can be produced even at present day costs. These sums are in no sense sufficient, however, to pay fixed charges on the structures that are required for such operation. It seems reasonable that this portion of the cost should be borne by the general taxpayer just as he pays the major portion of the cost of providing surface streets and expressways for the use of automobiles regardless of whether or not he pays any direct automobile fees.

Few of you are in the transit business. Why, then, this talk for the American Society of Civil Engineers? Because public transit is in danger of disappearing from the American scene unless you who understand the problem explain it with force and clarity to the civic leaders in your respective cities. You and I know that much of the work we are doing will be inadequate or even obsolete before it is completed if we accept the passing of public transit as a foregone conclusion. This includes our parking programs, our freeway systems, the rehabilitation of residential areas, and our work on almost every other portion of the urban structure.

If we take seriously our responsibility as professional men, it is time we act to keep our transit systems strong. Subsidy is necessary for adequate public transit, but transit's greatest need of the moment is for adequate civic leadership. We engineers can provide a portion of that leadership.